REMARKS/ARGUMENTS

Favorable reconsideration of this application, in light of the following discussion, is respectfully requested.

Claims 1-25 are pending and Claims 12, 15, 20 and 24 are amended by the present amendment. Thus, no new matter is added.

In the outstanding Office Action, Claim 15 was rejected under 35 U.S.C. § 102(b) as anticipated by Nakamura et al. (U.S. Pat. No. 6,108,353, herein "Nakamura"); and Claims 12, 16, 17, 18, 20 and 23 were rejected under 35 U.S.C. § 103(a) as unpatentable over Nakamura in view of Stott et al. (U.S. Pat. No. 6,628,730, herein "Stott"); and Claims 1-11, 13, 14 and 22 are allowed.

Initially, Applicant thanks the Examiner for the indication of allowable subject mater in Claims 1-11, 13, 14 and 22.

Further, Applicants wish to thank Examiner Shew and Primary Examiner Rao for the personal interview granted applicant's representative on October 18, 2006. During that interview the outstanding rejections were discussed in detail. Further, during that interview in response to the Examiner's suggestions claim amendments were discussed to clarify the claims. The present response sets forth the discussed claim amendments.

The outstanding rejection of Claim 15 under 35 U.S.C. §102(b) as anticipated by Nakamura is respectfully traversed.

As discussed in the interview, Nakamura describes a frame formed of 76, 55, 35, 15 or 5 continuous symbols. Further Nakamura describes an averaging circuit which averages the time synchronization signals of each symbol. In other words, Nakamura describes averaging different numbers of symbols (76, 55, etc) to create an average adjustment.

However, Nakamura does not describe or suggest changing the changing the timing of the synchronisation pulse by a predetermined adjustment quantity, said predetermined

adjustment quantity being calculated by a rounding operation so that said predetermined adjustment quantity is equal to a plurality of <u>sample periods</u>, as is recited in Claim 15 and supported at on page 16, paragraph (c) of the present specification. Thus, this feature recited in Claim 15, recites that the adjustment of the timing is by a plurality of sample periods, not just one, and that this adjustment is calculated by a rounding operation. <u>Nakamura</u> does not teach or suggest these features. In addition, it should be noted that the period over which the timing error is determined is not the same as the amount of adjustment. Changing the number of <u>symbols</u> over which the timing error is averaged (as is recited in <u>Nakamura</u>) does not necessarily have any effect on the amount of adjustment (the feature recited in Claim 15), instead changing the number <u>symbols</u> merely results in an alteration in the effect of noise on the error determination. Further, the "sample periods" recited in Claim 15 are not the same as the "symbol periods" recited in col. 8, lines 33-51 as one skilled in the art would understand that a "symbol" is comprised of multiple "samples."

Accordingly, as <u>Nakamura</u> does not describe all of the features recited in amended Claim 15, Claim 15 patentably distinguishes over the cited <u>Nakamura</u> reference.

In response to the outstanding rejection of Claim 12, Claim 12 has been amended as discussed in the interview to clarify that it is the magnitude of the calculated error that is compared with the predetermined threshold.

Accordingly, Amended Claim 12 recites, in part,

> calculating an error in the current timing<u>;</u>
> comparing the <u>magnitude of the</u> calculated error with a predetermined threshold<u>;</u> and
> adjusting the timing of the synchronisation pulse <u>when</u> the <u>magnitude of the</u> calculated error <u>in the current timing exceeds</u> said predetermined threshold..

With respect to Claim 12, the outstanding action acknowledges that <u>Nakamura</u> does

not describe or suggest the calculating, comparing and adjusting steps of Claim 12, but relies

on <u>Stott</u> as teaching these features.

<u>Stott</u> describes ZOOM and HUNT states. When the system is in ZOOM state and a

predetermined number of unlock events (error) occur, such as 4 or 5, the system enters the

HUNT state. In the HUNT state the timing synchronization process is unlocked. Thus, in

<u>Stott</u> four instances of any error will trigger the system to move into the HUNT state.

In contrast to the system of <u>Stott</u>, amended Claim 12 recites adjusting the timing of

the synchronization pulse when the magnitude of the calculated error in the current timing

exceeds said predetermined threshold.

Thus, in Claim 12, the same four instance of error may not cause the system to adjust

the timing, if the error is not above a certain threshold. <u>Stott</u> makes no mention of an error

magnitude threshold only a threshold of number of error events.

Therefore <u>Stott</u> clearly does not describe or suggest the features of the present

invention as recited in Claim 12.

With respect to independent Claims 20 and 24, Claims 20 and 24 have been amended

as discussed in the interview to clarify that the phase rotation unit directly receives the timing

signal.

Accordingly, as can be seen below, amended Claim 20 recites, in part,

> generating a synchronisation pulse and using the synchronisation pulse in order to apply, <u>in a FFT unit, a</u> Fast Fourier Transform to complex samples derived from the OFDM signal;
> providing, <u>once</u> the timing of the synchronisation pulse is altered, a signal representing the degree of alteration <u>to a phase rotation unit;</u> and
> applying to the transformed samples <u>received from the FFT,</u> phase rotations determined <u>based on the</u> signal.

Claim 24 recites analogous features.

The outstanding Action acknowledges on page 7, lines 11-13 that <u>Nakamura</u> does not teach or suggest the applying step of Claim 20 and similarly of Claim 24, but relies on <u>Stott</u> as teaching this feature.

As discussed in the interview, Figure 2 of <u>Stott</u> shows the time synchronization 26 connected to the FFT 24. However the time synchronization is not provided to the phase error correction 30, in contrast to the recitation in amended Claim 20 that the signal representing the degree of alteration is provided to the phase rotation unit and is applied to the FFT transformed samples received from the FFT unit.
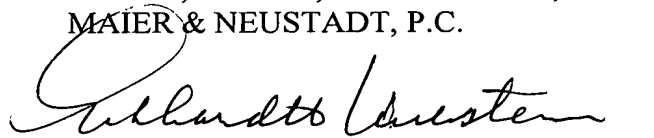
Therefore, neither <u>Nakamura</u>, <u>Stott</u>, or the further cited <u>Park,</u> describe these features recited in Claims 20 and 24.

Therefore, in light of the above discussion, Applicants respectfully submit that independent Claims 12, 15, 20 and 24 and claims depending therefrom, patentably distinguish over <u>Nakamura</u>, <u>Stott</u> or <u>Park</u> considered alone or combination.

Consequently, in view of the foregoing discussion and present amendments, it is respectfully submitted that this application is in condition for allowance. An early and favorable action is therefore respectfully requested.

Respectfully submitted,

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